

### **REMARKS**

Claims 1-12 were examined and reported in the Office Action. Claims 1-12 are rejected. Claims 1, 3-7 and 9-12 are amended. Claims 1-12 remain.

Applicants request reconsideration of the application in view of the following remarks.

#### **I. In the Drawings**

It is asserted in the Office Action that Figure 3 should be designated by a legend ----"Prior Art"-- because only that which is old is illustrated. A replacement sheet reflecting this change is enclosed with this response. Approval is respectfully requested.

#### **II. In The Specification**

It is asserted in the Office Action that the specification is objected to for informalities. Applicant has amended the specification to overcome the informal objections.

Accordingly, withdrawal of the informal objections of the specification is respectfully requested.

#### **III. 35 U.S.C. § 103(a)**

It is asserted in the Office Action that claims 1-12 are rejected in the Office Action under 35 U.S.C. § 103(a), as being unpatentable over U. S. Publication No. 2002/0009109 by Asano ("Asano"). Applicant respectfully traverses the aforementioned rejection for the following reasons.

According to MPEP §2142

[t]o establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference

or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. (In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)).

Further, according to MPEP §2143.03, “[t]o establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. (In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974).” “*All words in a claim must be considered in judging the patentability of that claim against the prior art.*” (In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970), emphasis added.)

Applicant's amended claim 1 contains the limitations of

an optical output detector which detects an optical power output from the laser diode and converts the optical power into a voltage; a bias current controller which detects a maximum level of the voltage and outputs a first control value corresponding to a difference between the maximum level and a first reference voltage, the bias current controller consists of a top holder and an automatic power controller; a modulation current controller which detects a minimum level of the voltage and outputs a second control value corresponding to a difference between the minimum level and a second reference voltage, the modulation current controller consists of a bottom holder and an automatic modulation controller; and a laser diode driver which outputs a drive current to the laser diode according to the first and second control values.

Asano discloses a laser diode driver circuit that provides an automatic power control for a laser diode. Asano further discloses a peak error detector 4 including a peak hold circuit 41 and an operational amplifier 42 with a feedback resistor 43; and a bottom error detector 5 including a bottom hold circuit 51 and an operational amplifier 52 with a feedback resistor 53 (see Asano, Fig. 2). Asano's laser driver circuit concerns improving the start-up period. Applicant's claimed invention is concerned with maintaining optical power regardless of a change in characteristics of a laser diode (e.g., characteristic change from temperature).

Applicant's claimed invention includes a bias current controller consisting of an automatic power controller and a top holder; and a modulation current controller consisting of a bottom holder and an automatic modulation controller. As illustrated in Applicant's Fig. 1, neither the automatic power controller nor the automatic modulation controller include a feedback resistor. To replace Applicant's automatic power controller and top holder with Asano's operational amplifier 42 with feedback resistor 43 with peak hold circuit 41 would change the operation of the circuit. And, to replace Applicant's automatic modulation controller and bottom holder with Asano's operational amplifier 52 with feedback resistor 53 and bottom hold circuit 51 would further change the operation of the circuit. The new circuit would not result in the same operation as Applicant's circuit due to the way the feedback resistors operate with the operation amplifiers disclosed in Asano.

Moreover, by viewing the disclosure of Asano in view of no other prior art, one can not jump to the conclusion of obviousness without impermissible hindsight. According to MPEP 2142,

[t]o reach a proper determination under 35 U.S.C. 103, the examiner must step backward in time and into the shoes worn by the hypothetical 'person of ordinary skill in the art' when the invention was unknown and just before it was made. In view of all factual information, the examiner must then make a determination whether the claimed invention 'as a whole' would have been obvious at that time to that person. Knowledge of applicant's disclosure must be put aside in reaching this determination, yet kept in mind in order to determine the 'differences,' conduct the search and evaluate the 'subject matter as a whole' of the invention. The tendency to resort to 'hindsight' based upon applicant's disclosure is often difficult to avoid due to the very nature of the examination process. However, impermissible hindsight must be avoided and the legal conclusion must be reached on the basis of the facts gleaned from the prior art.

Applicant submits that without first reviewing Applicant's disclosure, no thought, whatsoever, would have been made to a laser diode circuit to compensate for a change in characteristics including

a bias current controller which detects a maximum level of the voltage and outputs a first control value corresponding to a difference between the maximum level and a first reference voltage, the bias current controller consists of a top holder and an automatic power controller; a modulation current controller which detects a minimum level of the voltage and outputs a second control value corresponding to a difference between the minimum level and a second reference voltage, the modulation current controller consists of a bottom holder and an automatic modulation controller.

Since Asano does not teach, disclose or suggest all the limitations of Applicant's amended claims 1 and 7, as listed above, Applicant's amended claims 1 and 7 are not obvious over Asano in view of no other prior art since a *prima facie* case of obviousness has not been met under MPEP §2142. Additionally, the claims that directly or indirectly depend from amended claims 1 and 7, namely claims 2-6, and 8-12, respectively, would also not be obvious over Asano in view of no other prior art for the same reason.

Accordingly, withdrawal of the 35 U.S.C. § 103(a) rejections for claims 1-12 are respectfully requested.

**CONCLUSION**

In view of the foregoing, it is believed that all claims now pending, namely 1-10, patentably define the subject invention over the prior art of record and are in condition for allowance and such action is earnestly solicited at the earliest possible date.

If necessary, the Commissioner is hereby authorized in this, concurrent and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2666 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17, particularly extension of time fees.

Respectfully submitted,

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**CERTIFICATE OF MAILING**

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail with sufficient postage in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P. O. Box 1450, Alexandria, Virginia 22313-1450 on May 3, 2006.

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Jean Svoboda